

Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1.-57. (Canceled)

58. (Previously presented) The method according to claim 107, wherein the biologically active agent is added above or around room temperature.

59. (Canceled)

60. (Previously presented) The method according to claim 107, wherein the chemical reaction comprises one or more of etherification, esterification, hydrolysis, substitution, addition, elimination, oligomerization, or polymerization.

61. (Previously presented) The method according to claim 60, wherein the chemical reaction provides optimal delivery rate of the biologically active agent.

62. (Previously presented) The method according to claim 107, further comprising subjecting the carrier starting substance to a temperature of from around -50°C to around 300°C.

63. (Previously presented) The method according to claim 107, wherein in step (b), the chemical reaction is carried out for a time period of from 1 minute to 6 months.

64. (Currently amended) The method according to claim 107, wherein the one or more carrier starting substances ~~substance, or mixture of two or more different carrier starting substances,~~ is selected from the group consisting of monomers, acids, alcohols, ketones, aldehydes, amines, amides, anhydrides, lactides, glycolides, saccharides, acrylic or acrylamide compounds, monomers of polyethylene oxide (PEO) diacrylate, cyanoacrylate, acrylate saccharides, acrylate lactate, acrylate glycolate, isocyanates, ethylene oxide, propylene oxide, pyrrolidone, PEO-diacrylate, ethylene-vinylacetate, monomers of organic siloxanes, and oligomers, polymers and prepolymers thereof.

65. (Previously presented) The method according to claim 64, wherein the acid is a monomeric acid and the alcohol is a monomeric alcohol, and further wherein the non-crystalline matrix comprises an ester or polyester thereof.
66. (Previously presented) The method according to claim 65, wherein the monomeric acid is citric acid.
67. (Previously presented) The method according to claim 65, wherein the monomeric alcohol is propylene glycol.
68. (Previously presented) The method according to claim 107, wherein the biologically active agent is a pharmaceutically active agent.
69. (Previously presented) The method according to claim 68, wherein the pharmaceutically active agent is selected from the group consisting of guanosides, corticosteroids, psychopharmaceutical hormones, oxicams, peptides, proteins, antibiotics, antivirals, antimicrobials, anticancer agents, antifungals, estrogens, anti-inflammatory agents, neuroleptic agents, melanocyte stimulants, gland stimulants, sebaceous gland stimulants, pilosebaceous gland stimulants and agents affecting mast cell secretion.
70. (Previously presented) The method according to claim 107, wherein the second degree of saturation is increased with respect to the first degree of saturation due to chemical reaction such that the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier matrix is different from the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier starting substance.
- 71.-72. (Cancelled)
73. (Previously presented) The method according to claim 68, wherein the pharmaceutically active agent comprises a medicament for topical or dermal application to a human or non-human mammal in need thereof.
74. (Cancelled)

75. (Previously presented) The method according to claim 64, wherein the acrylic compound is methacrylate.

76. (Previously presented) The method according to claim 107, wherein said predetermined time is from 0.5 hours to 4 months after initiating the chemical reaction.

77. (Previously presented) The method according to claim 107, wherein the composition is further chemically reacted for a time period from about 0.5 hours to 4 months.

78.-80. (Cancelled)

81. (Previously presented) The method according to claim 64, wherein the acids are selected from the group consisting of mono-, di-, tri-acids and higher acids.

82. (Previously presented) The method according to claim 64, wherein the alcohols are selected from the group consisting of mono-alcohols, diols and triols.

83. (Previously presented) The method according to claim 64, wherein the acrylate saccharides are acrylate starch.

84. (Previously presented) The method according to claim 107, wherein in step (b), the composition is chemically reacted at a temperature of from around 0°C to around 150°C.

85. (Cancelled)

86. (Previously presented) The method according to claim 107, wherein the carrier starting substances, or the formed non-crystalline carrier matrix, act as a solvent or dispersing medium.

87. (Currently amended) A process of preparing a biologically active composition, comprising:

- (a) providing ~~a carrier starting substance, or a mixture of two one or more different~~ carrier starting substances;

- (b) dissolving or dispersing a biologically active agent to a first degree of saturation in the one or more carrier starting substances; substance, or the mixture of two or more different carrier starting substances; and
- (c) subjecting the one or more carrier starting substances substance, or mixture thereof, to a chemical reaction over a period of time to form or cleave covalent bonds so as to form a liquid or a solid non-crystalline carrier matrix in which the biologically active agent is present at a second degree of saturation that is higher than that of step (b), so as to form the biologically active composition;

wherein the chemical reaction of step (c) is initiated:

- (i) in the presence of the biologically active agent in an amount effective to obtain in the composition the second degree of saturation of the biologically active agent relative to the first degree of saturation of step (b); or
- (ii) ~~in the absence of the biologically active agent, wherein the biologically active agent is added at a predetermined time after the chemical reaction is initiated, in an amount effective to obtain in the composition the second degree of saturation of the biologically active agent relative to the first degree of saturation of step (b), after which predetermined time the composition is further subjected to the chemical reaction.~~

88. (Currently amended) The method according to claim 87 or claim 143, wherein the chemical reaction comprises one or more of etherification, esterification, hydrolysis, substitution, addition, elimination, oligomerization, or polymerization.

89. (Currently amended) The method according to claim 87 or claim 143, wherein the one or more carrier starting substances substance, or mixture of two or more different carrier starting substances, is selected from the group consisting of monomers, acids, alcohols, ketones, aldehydes, amines, amides, anhydrides, lactides, glycolides, saccharides, acrylic or acrylamide compounds, monomers of polyethylene oxide (PEO)-diacrylate, cyanoacrylate,

acrylate saccharides, acrylate lactate, acrylate glycolate, isocyanates, ethylene oxide, propylene oxide, pyrrolidone, PEO-diacrylate, ethylene-vinylacetate, monomers of organic siloxanes, and oligomers, polymers and prepolymers thereof.

90. (Currently amended) The method according to claim 89 or claim 143, wherein the acids are selected from the group consisting of mono-acids, di-acids, tri-acids and higher acids and the alcohols are selected from the group consisting of mono-alcohols, diols and triols.

91. (Currently amended) The method according to claim 89 or claim 143, wherein the acrylate saccharides are acrylate starch.

92. (Currently amended) The method according to claim 87 or claim 143, wherein the biologically active agent is a pharmaceutically active agent.

93. (Previously presented) The method according to claim 92, wherein the pharmaceutically active agent is selected from the group consisting of guanosides, corticosteroids, psychopharmaceutical hormones, oxicams, peptides, proteins, antibiotics, antivirals, antimicrobials, anticancer agents, antifungals, estrogens, anti-inflammatory agents, neuroleptic agents, melanocyte stimulants, gland stimulants, sebaceous gland stimulants, pilosebaceous gland stimulants and agents affecting mast cell secretion.

94. (Cancelled)

95. (Previously presented) The method according to claim 92, wherein the pharmaceutically active agent comprises a medicament for topical or dermal application to a human or non-human mammal in need thereof.

96.-97. (Cancelled)

98. (Currently amended) The method according to claim 87 or claim 143, wherein, in step (c), the chemical reaction is performed for a time period of from 1 minute to 6 months.

99. (Currently amended) The method according to claim 87 or claim 143, wherein, in step (c), the chemical reaction is performed for a time period from 0.5 hours to 4 months.

100. (Currently amended) The method according to claim 87 or claim 143, wherein the one or more carrier starting substances substance, or mixture of two or more different carrier starting substances, is subjected to the chemical reaction at a temperature of from around -50°C to around 300°C.
101. (Currently amended) The method according to claim 87 or claim 143, wherein the one or more carrier starting substances substance, or mixture of two or more different carrier starting substances, is subjected to the chemical reaction at a temperature of from around 0°C to 150°C.
102. (Currently amended) The method according to claim 87 or claim 143, wherein the second degree of saturation is increased with respect to the first degree of saturation due to the chemical reaction such that the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier matrix is different from the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier starting substance.
103. (Currently amended) The method according to claim 87 or claim 143, wherein said predetermined time for adding the biologically active agent in step (c) is from 0.5 hours to 4 months after initiating the chemical reaction.
104. (Currently amended) The method according to claim [[87]] 143, wherein, in (ii), said composition is further subjected to the chemical reaction from 0.5 hours to 4 months.
105. (Currently amended) The method according to claim 87 or claim 143, wherein the one or more carrier starting substances substance, the mixture of two or more different carrier starting substances, or the formed non-crystalline carrier matrix, acts as a solvent or dispersing medium.
106. (Currently amended) The method according to claim 87 or claim 143, wherein the biologically active agent is dissolved or dispersed in the one or more carrier starting substances substance, the mixture of two or more different carrier starting substances, at a temperature of about 25°C to 200°C.

107. (Currently amended) A method of preparing a biologically active composition comprising a biologically active agent and a carrier from which dissolved and/or dispersed in a carrier therefor, said biologically active agent is releasable therefrom, the method comprising:

- (a) providing [[a]] one or more carrier starting substances substance, or a mixture of two or more different carrier starting substances, having a property that the biologically active agent is either dispersed or dissolved therein up to a first degree of saturation; and
- (b) subjecting the one or more carrier starting substances substance, or mixture of two or more different carrier starting substances, of step (a) to a chemical reaction, said chemical reaction being carried out over a period of time to ~~form or cleave covalent bonds~~ and result in the formation of a liquid or solid non-crystalline carrier matrix having a first property that the biologically active agent is dispersed or dissolved therein up to a second degree of saturation that is greater than the first degree of saturation; and a second property that precipitation of the biologically active agent is substantially inhibited after saturation of the biologically active agent in the composition;

wherein: (i)-prior to step (b), the biologically active agent is added to the one or more carrier starting substances substance or mixture thereof in step (a) to form [[a]] the composition, wherein the biologically active agent is present up to the first degree of saturation of step (a); and the chemical reaction of step (b) is carried out on the composition, resulting in the formation of the non-crystalline carrier matrix in which the biologically active agent is present up to the second degree of saturation that is greater than the first. ~~, or, alternatively,~~

~~(ii) the biologically active agent is added at a predetermined time after the chemical reaction is initiated in step (b) to provide a composition in which the biologically active agent is present up to the first degree of saturation of step (a), said composition then being subjected to further chemical reaction resulting in the formation of the non-crystalline carrier matrix in which the biologically active agent is present up to the second degree of saturation that is greater than the first.~~

108. (Currently amended) A method of preparing a biologically active composition comprising a biologically active agent dissolved ~~and/or or~~ dispersed in a carrier therefrom from which the biologically active agent can be released, said method comprising:

- (a) providing a composition comprising [[a]] one or more carrier starting substances substance, or a mixture of two or more different carrier starting substances; and the biologically active agent dissolved or dispersed therein, said biologically active agent present in an amount effective to obtain a first degree of saturation in the composition;
- (b) subjecting the composition of step (a) to a chemical reaction over a period of time effective to produce form or cleave covalent bonds resulting in a liquid or solid non-crystalline carrier matrix in which the biologically active agent is dissolved or dispersed up to a second degree of saturation that is greater than the first degree of saturation in the composition of step (a); and wherein precipitation of the biologically active agent is substantially inhibited in the carrier matrix.

109. (Currently amended) A method of preparing a biologically active composition having a biologically active agent dissolved ~~and/or~~ dispersed in a carrier therefore from which the biologically active agent can be released comprising:

- (a) dissolving or dispersing a biologically active agent up to a first degree of saturation in [[a]] one or more carrier starting substances substance, or a mixture of two or more different carrier starting substances; to form a composition; and
- (b) subjecting the composition of step (a) to a chemical reaction over a period of time effective to produce form or cleave covalent bonds resulting in a liquid or solid non-crystalline carrier matrix in which the biologically active agent is present up to a second degree of saturation that is greater than the first degree of saturation in the composition of step (a); and wherein precipitation of the biologically active agent is substantially inhibited in the carrier matrix.

110. (Currently amended) A method of preparing a biologically active composition having a biologically active agent dissolved and/or dispersed in a carrier therefor, and from which the biologically active agent can be released, comprising:

- (a) initiating a chemical reaction on [[a]] one or more carrier starting substances ~~substance, or a mixture of two or more different carrier starting substances, said chemical reaction resulting in formation or cleavage of covalent bonds;~~
- (b) adding to step (a) a biologically active agent to produce a composition in which the biologically active agent is present up to a first degree of saturation of the biologically active agent in the composition;
- (c) subjecting the composition of step (b) to further chemical reaction resulting in a liquid or solid non-crystalline carrier matrix in which the biologically active agent is dissolved and/or dispersed in the carrier matrix up to a second degree of saturation that is greater than the first degree of saturation in the composition of step (b), and wherein precipitation of the biologically active agent is substantially inhibited in the carrier matrix.

111. (Previously presented) The method according to claim 110, wherein said biologically active agent is added from 0.5 hours to 4 months after initiating the chemical reaction.

112. (Previously presented) The method according to claim 110, wherein the composition of step (c) is subjected to further chemical reaction for a period of time from 0.5 hours to 4 months.

113. (Previously presented) The method according to any one of claims 108, 109, or 110, wherein the chemical reaction comprises one or more of etherification, esterification, hydrolysis, substitution, addition, elimination, oligomerization, or polymerization.

114. (Currently amended) A method of preparing a biologically active composition comprising a biologically active agent dissolved and/or dispersed in a carrier therefor from which the biologically active agent can be released, said method comprising:

subjecting a composition comprising the biologically active agent and [[a]] one or more ~~carrier starting substance, or a mixture of two or more different~~ carrier starting substances, to a

chemical reaction involving formation or cleavage of covalent bonds and selected from one or more of etherifying, esterifying, hydrolysis, substitution, addition, elimination, oligomerizing and/or polymerizing, said biologically active agent present in the composition up to a first degree of saturation; wherein said chemical reaction results in the formation of a liquid or solid non-crystalline carrier matrix in which the biologically active agent is present in the carrier matrix up to a second degree of saturation that is greater than the first degree of saturation in the composition; and wherein precipitation of the biologically active agent is substantially inhibited in the carrier matrix.

115. (Currently amended) The method according to any one of claims 108, 109, 110, or 114, wherein the one or more carrier starting substances substance, or mixture of two or more different carrier starting substances, is selected from the group consisting of monomers, acids, alcohols, ketones, aldehydes, amines, amides, anhydrides, lactides, glycolides, saccharides, acrylic or acrylamide compounds, monomers of polyethylene oxide (PEO) diacrylate, cyanoacrylate, acrylate saccharides, acrylate lactate, acrylate glycolate, isocyanates, ethylene oxide, propylene oxide, pyrrolidone, PEO-diacrylate, ethylene-vinylacetate, monomers of organic siloxanes, and oligomers, polymers and prepolymers thereof.

116. (Previously presented) The method according to claim 115, wherein the acid is a monomeric acid and the alcohol is a monomeric alcohol, and further wherein the non-crystalline matrix comprises an ester or polyester thereof.

117. (Previously presented) The method according to claim 116, wherein the monomeric acid is citric acid.

118. (Previously presented) The method according to claim 116, wherein the monomeric alcohol is propylene glycol.

119. (Previously presented) The method according to any one of claims 108, 109, 110, or 114, wherein the biologically active agent is a pharmaceutically active agent.

120. (Previously presented) The method according to claim 119, wherein the pharmaceutically active agent is selected from the group consisting of guanosides,

corticosteroids, psychopharmaceutical hormones, oxicams, peptides, proteins, antibiotics, antivirals, antimicrobials, anticancer agents, antifungals, estrogens, anti-inflammatory agents, neuroleptic agents, melanocyte stimulants, gland stimulants, sebaceous gland stimulants, pilosebaceous gland stimulants and agents affecting mast cell secretion.

121. (Previously presented) The method according to any one of claims 108, 109, 110, or 114, wherein the second degree of saturation is increased with respect to the first degree of saturation due to chemical reaction such that the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier matrix is different from the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier starting substance.

122. (New) A method of preparing a biologically active composition comprising a biologically active agent and a carrier from which said biologically active agent is releasable, the method comprising:

- (a) providing one or more carrier starting substances having a property that the biologically active agent is dispersed or dissolved therein up to a first degree of saturation; and
- (b) subjecting the one or more carrier starting substances of step (a) to a chemical reaction, said chemical reaction being carried out over a period of time to result in the formation of a liquid or solid non-crystalline carrier matrix having a first property that the biologically active agent is dispersed or dissolved therein up to a second degree of saturation that is greater than the first degree of saturation; and a second property that precipitation of the biologically active agent is substantially inhibited after saturation of the biologically active agent; wherein the biologically active agent is added at a predetermined time after the chemical reaction is initiated in step (b) to provide a composition in which the biologically active agent is present up to the first degree of saturation of step (a), said composition then being subjected to further chemical reaction resulting in the formation of the non-crystalline carrier matrix in which the biologically active agent is present up to the second degree of saturation that is greater than the first.

123. (New) The method according to claim 122, wherein the biologically active agent is added above or around room temperature.
124. (New) The method according to claim 122, wherein the chemical reaction comprises one or more of etherification, esterification, hydrolysis, substitution, addition, elimination, oligomerization, or polymerization.
125. (New) The method according to claim 122, further comprising subjecting the carrier starting substance to a temperature of from around -50°C to around 300°C.
126. (New) The method according to claim 122, wherein in step (b), the chemical reaction is carried out for a time period of from 1 minute to 6 months.
127. (New) The method according to claim 122, wherein the one or more carrier starting substances is selected from the group consisting of monomers, acids, alcohols, ketones, aldehydes, amines, amides, anhydrides, lactides, glycolides, saccharides, acrylic or acrylamide compounds, monomers of polyethylene oxide (PEO) diacrylate, cyanoacrylate, acrylate saccharides, acrylate lactate, acrylate glycolate, isocyanates, ethylene oxide, propylene oxide, pyrrolidone, PEO-diacrylate, ethylene-vinylacetate, monomers of organic siloxanes, and oligomers, polymers and prepolymers thereof.
128. (New) The method according to claim 127, wherein the acid is a monomeric acid and the alcohol is a monomeric alcohol, and further wherein the non-crystalline matrix comprises an ester or polyester thereof.
129. (New) The method according to claim 128, wherein the monomeric acid is citric acid.
130. (New) The method according to claim 128, wherein the monomeric alcohol is propylene glycol.
131. (New) The method according to claim 122, wherein the biologically active agent is a pharmaceutically active agent.

132. (New) The method according to claim 131, wherein the pharmaceutically active agent is selected from the group consisting of guanosides, corticosteroids, psychopharmaceutical hormones, oxicams, peptides, proteins, antibiotics, antivirals, antimicrobials, anticancer agents, antifungals, estrogens, anti-inflammatory agents, neuroleptic agents, melanocyte stimulants, gland stimulants, sebaceous gland stimulants, pilo-sebaceous gland stimulants and agents affecting mast cell secretion.

133. (New) The method according to claim 122, wherein the second degree of saturation is increased with respect to the first degree of saturation due to chemical reaction such that the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier matrix is different from the degree of dissociation, aggregation or degree of protonation of the biologically active agent in the carrier starting substance.

134. (New) The method according to claim 131, wherein the pharmaceutically active agent comprises a medicament for topical or dermal application to a human or non-human mammal in need thereof.

135. (New) The method according to claim 127, wherein the acrylic compound is methacrylate.

136. (New) The method according to claim 122, wherein said predetermined time is from 0.5 hours to 4 months after initiating the chemical reaction.

137. (New) The method according to claim 122, wherein the composition is further chemically reacted for a time period from about 0.5 hours to 4 months.

138. (New) The method according to claim 127, wherein the acids are selected from the group consisting of mono-, di-, tri-acids and higher acids.

139. (New) The method according to claim 127, wherein the alcohols are selected from the group consisting of mono-alcohols, diols and triols.

140. (New) The method according to claim 127, wherein the acrylate saccharides are acrylate starch.

141. (New) The method according to claim 122, wherein in step (b), the composition is chemically reacted at a temperature of from around 0°C to around 150°C.
142. (New) The method according to claim 122, wherein the carrier starting substances, or the formed non-crystalline carrier matrix, act as a solvent or dispersing medium.
143. (New) A process of preparing a biologically active composition, comprising:
- (a) providing one or more carrier starting substances;
 - (b) dissolving or dispersing a biologically active agent to a first degree of saturation in the one or more carrier starting substances; and
 - (c) subjecting the one or more carrier starting substances to a chemical reaction over a period of time to form a liquid or a solid non-crystalline carrier matrix in which the biologically active agent is present at a second degree of saturation that is higher than that of step (b), so as to form the biologically active composition;
- wherein the chemical reaction of step (c) is initiated in the absence of the biologically active agent, wherein the biologically active agent is added at a predetermined time after the chemical reaction is initiated, in an amount effective to obtain in the composition the second degree of saturation of the biologically active agent relative to the first degree of saturation of step (b), after which predetermined time the composition is further subjected to the chemical reaction.